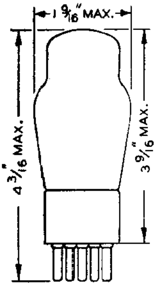
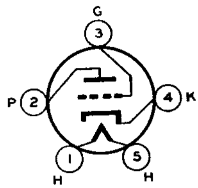



# RCA-27

## DETECTOR, AMPLIFIER




The 27 is a three-electrode general purpose tube of the heater-cathode type for use as an amplifier and detector in a-c receivers.

### CHARACTERISTICS

| | | | | | |
|---|---|---|---|---|---|
| Heater Voltage (A. C. or D. C.) | | | | 2.5 | Volts |
| Heater Current | | | | 1.75 | Amperes |
| Plate Voltage* | 90 | 135 | 180 | 250 | Volts |
| Grid Voltage† | −6 | −9 | −13.5 | −21 | Volts |
| Plate Current | 2.7 | 4.5 | 5.0 | 5.2 | Milliamperes |
| Plate Resistance | 11000 | 9000 | 9000 | 9250 | Ohms |
| Amplification Factor | 9 | 9 | 9 | 9 | |
| Transconductance | 820 | 1000 | 1000 | 975 | Micromhos |
| Grid-Plate Capacitance | | | | 3.3 | μμf |
| Grid-Cathode Capacitance | | | | 3.1 | μμf |
| Plate-Cathode Capacitance | | | | 2.3 | μμf |
| Bulb | | | | | ST-12 |
| Base | | | | | Small 5-Pin |

* Maximum plate voltage = 275 volts.
† Maximum value of d-c resistance in grid circuit is 1.0 megohm.

### INSTALLATION AND APPLICATION

The **base** pins of the 27 fit the standard five-contact socket. The socket may be installed to hold the tube in any position.

For **heater** operation and **cathode** connection, refer to type 2A5.

As an **amplifier,** the 27 is applicable to the audio- or the radio-frequency stages of a receiver. Recommended plate and grid voltages are shown under CHARACTERISTICS.

As a **detector,** the 27 may be operated either with grid leak and condenser or with grid bias. The plate voltage for grid leak and condenser detection is 45 volts. A grid leak of from 1 to 5 megohms used with a grid condenser of 0.00025 μf is suitable. For grid-bias detection, a plate voltage of 275 volts or less may be used. The corresponding grid bias should be adjusted so that the plate current, when no signal is being received, is approximately 0.2 milliampere. For the condition of 250 volts on plate and transformer coupling, the grid bias will be approximately −30 volts.

AVERAGE PLATE CHARACTERISTICS

